

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

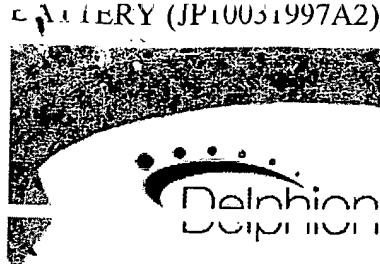
Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.



[ABOUT DELPHION](#) [PRODUCTS](#) [NEWS/EVENTS](#) [MY ACCOUNT](#) [IP RESEARCH](#)
[Browse Codes](#) [IP Listings](#) [Prior Art](#) [Derwent](#) [Advanced](#) [Boolean](#) [Quick/Number](#)

The Delphion
Integrated
View

Other Views:
[INPADOC](#)

Title: **JP10031997A2: BATTERY**

► [Want to see a more descriptive title highlighting what's new about this invention?](#)

Country: **JP Japan**
Kind: **A**

Inventor(s): **TANIGUCHI MASAhide**
NAKANISHI MEGUMI
HASHISAKA KAZUHIKO

Applicant/Assignee:



TORAY IND INC

[News, Profiles, Stocks and More about this company](#)

Issued/Filed Dates:

Feb. 3, 1998 / July 18, 1996

Application Number:

JP1996000189337

IPC Class:

H01M 2/34; H01M 10/40;

► [Interested in classification by use rather than just by description?](#)

Priority Number(s):

July 18, 1996 **JP1996000189337**

Abstract:



Problem to be solved: To provide a highly safe battery with high capacity by making a material which absorbs heat by the contact with the outside air present in at least a part of the part making contact with a battery vessel.

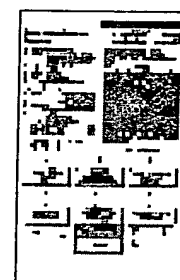
Solution: In this battery, an electrode body 5 having a positive electrode lead 4 and a negative electrode lead 6 is housed in a battery can 3, and the opening part of the can 3 is sealed by a sealing body 1 through a sealant 2. As the structure of the sealing body 1, for example, a heat absorbing material tank 12 having fleon 113 sealed therein is provided on the lower surface of the layered body of a cap 11 having a hole 10, a PTC element 7, a pressure releasing plate 8 having a heat absorbing material opening part 13 and an insulating plate 9. When the battery is broken, the release part 13 slips out, and the fluorocarbon 113 is evaporated to absorb heat as soon as it is exposed to the outside air. Therefore, even if there should be a heating that the energy possessed by the battery in charged state is released to the outside by a short circuit, the rise of the battery temperature can be suppressed, and firing can be prevented.

COPYRIGHT: (C)1998,JPO

► [See a clear and precise summary of the whole patent, in understandable terms.](#)

Family: [Show known family members](#)

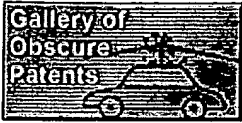
Other Abstract Info: **DERABS G98-165433 DERG98-165433**



[View
Image](#)

1 page

Foreign References: No patents reference this one



Nominate this
for the Gallery...

[Subscribe](#) | [Privacy Policy](#) | [Terms & Conditions](#) | [FAQ](#) | [Site Map](#) | [Help](#) | [Contact Us](#)

© 1997 - 2002 Delphion Inc.



(19)

(11) Publication number: **10031997 A**

Generated Document.

PATENT ABSTRACTS OF JAPAN(21) Application number: **08189337**(51) Intl. Cl.: **H01M 2/34 H01M 10/40**(22) Application date: **18.07.96**

(30) Priority:

(43) Date of application
publication: **03.02.98**(84) Designated contracting
states:(71) Applicant: **TORAY IND INC**(72) Inventor: **TANIGUCHI MASAHIRO
NAKANISHI MEGUMI
HASHISAKA KAZUHIKO**

(74) Representative:

(54) BATTERY

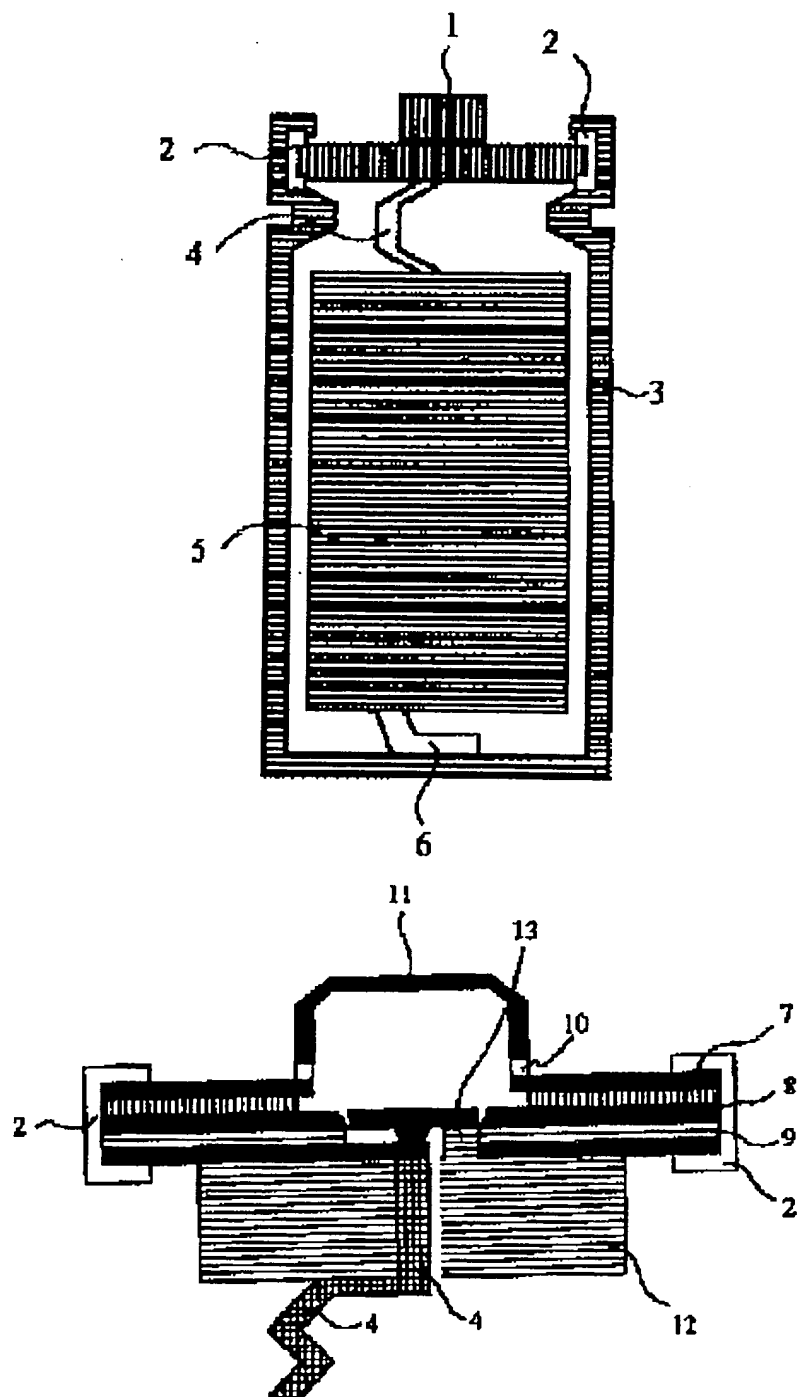
(57) Abstract:

PROBLEM TO BE SOLVED: To provide a highly safe battery with high capacity by making a material which absorbs heat by the contact with the outside air present in at least a part of the part making contact with a battery vessel.

SOLUTION: In this battery, an electrode body 5 having a positive electrode lead 4 and a negative electrode lead 6 is housed in a battery can 3, and the opening part of the can 3 is sealed by a sealing body 1 through a sealant 2. As the structure of the sealing body 1, for example, a heat absorbing material tank 12 having freon 113 sealed therein is provided on the lower surface of the layered body of a cap 11 having a hole 10, a PTC element 7, a pressure releasing plate 8 having a heat absorbing material opening part 13 and an insulating plate 9. When the battery is broken, the release part 13 slips out, and the fluorocarbon 113 is evaporated to absorb heat as soon as it is exposed to the outside air. Therefore, even if there should be a

heating that the energy possessed by the battery in charged state is released to the outside by a short circuit, the rise of the battery temperature can be suppressed, and firing can be prevented.

COPYRIGHT: (C)1998,JPO





[ABOUT DELPHION](#)

[PRODUCTS](#)

[NEWS/EVENTS](#)

[MY ACCOUNT](#)

[IP SEARCH](#)

[HELP](#)

[Log Out](#) [Order Form](#) [Work Files](#) [View Cart](#)

[Browse Codes](#)

[IP Listings](#)

[Prior Art](#)

[Derwent](#)

[Advanced](#)

[Boolean](#)

[Quick/Number](#)

Derwent information adds clarity and brings out the real meaning of each patent or application – letting you complete your research more quickly with better results.

Derwent Records like this one are available FREE for a limited time.

[More Information](#)

Battery with non-aqueous electrolyte used in portable equipment such as video camera, portable telephone, notebook type PC - has heat absorption substance containing battery vessel, made to protrude towards open air

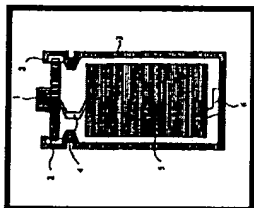
Assignee: **TORAY IND INC** Standard company (TORA...)
Inventor(s): **none**

Accession / Update: **1998-165433 / 199815**

IPC Class: **H01M 2/34 ; H01M 10/40 ;**

Derwent Classes: **X16;**

Manual Codes: **X16-B01F1**(Lithium-based) , **X16-F03**(Terminals, internal connections, vents, filler caps)



Derwent Abstract

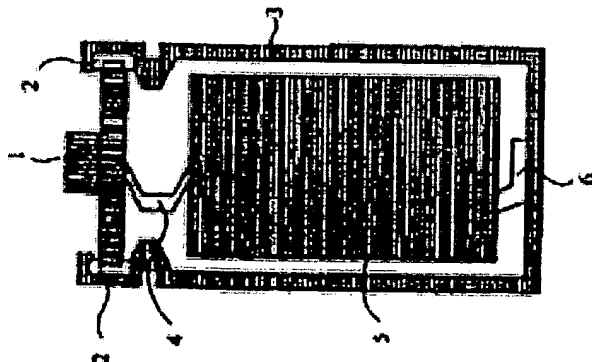
(JP10031997A) The battery includes an electrode material provided in a battery vessel. A heat absorption substance which contacts the battery vessel, is made to protrude towards open air. **Advantage** - Increases battery capacity. Improves manufacturing of battery with safety.

DERWENT RECORD

[Set Up Derwent Access Now](#)

Abstract info: **JP10031997A: Dwg.1/4**

Images:



Family:

Patent	Issued	DW Update	Pages	Language	IPC Class
JP10031997A *	Feb. 03, 1998	199815	5	English	H01M 2/34
Local appls.: JP1996000189337 ApplDate:1996-07-18 (96JP-0189337)					

Priority Number(s):

JP1996000189337

July 18, 1996

BATTERY

Title Terms:

BATTERY NON AQUEOUS ELECTROLYTIC PORTABLE EQUIPMENT VIDEO CAMERA
PORTABLE TELEPHONE TYPE HEAT ABSORB SUBSTANCE CONTAIN BATTERY VESSEL
MADE PROTRUDE OPEN AIR



[Pricing](#)



[Current charges](#)

Data copyright Derwent 2002

**Derwent
Searches**



[Patent /
Numbers](#)



[Boolean Text](#)



[Advanced Text](#)



[Demo](#)

[Subscribe](#) | [Privacy Policy](#) | [Terms & Conditions](#) | [FAQ](#) | [Site Map](#) | [Help](#) | [Contact Us](#)

© 1997 - 2002 Delphion Inc.